SOIL GROUTING IMPROVER EXCELLENT IN SOLUTION HARDENING STABILITY AT LOW TEMPERATURE

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Abstract of **JP 10036843 (A)**

PROBLEM TO BE SOLVED: To obtain a soil grouting improver excellent in soln. hardening stability at a low temp. which has excellent working stability by incorporating a curing agent, comprising phosphoric acid and glyoxal, and a chemical soln. stabilizer into a specified aq. sodium silicate soln. or a mixed aq. soln. contg. sodium silicate and colloidal silica. SOLUTION: An aq. soln. contg. sodium silicate having an SiO2 to Na2 O molar ratio of (2.45:1) to (4.5:1) in an amt. of 10 to 50wt.% in terms of the total amt. of SiO2 and Na2 O, or a mixed aq. soln. contg. sodium silicate having an SiO2 to Na2 O molar ratio of not more than (4.5:1) and a colloidal silica having an SiO2 to Na2 O molar ratio of (20:1) to (250:1), the SiO2 to Na2 O molar ratio in the aq. soln. being (3:1) to (50:1), the total amt. of SiO2 and Na2 O in the mixed aq. soln. being 10 to 50wt.%, is prepared as a main agent. An aq. curing agent soln. comprising phosphoric acid in an amt. capable of neutralizing 20 to 50mol% of Na2 O in the main agent and glyoxal in an amt. capable of neutralizing 5 to 30mol% of Na2 O in the main agent is then mixed with the main agent in a main agent to curing agent ratio of (1:0.9) to (0.9 to 1). This mixed soln. is then mixed with a chemical soln. stabilizer, such as urea or a urea compd., in an amt. of 0.1 to 10kg based on 200 liters of the chemical soln. to obtain a soil grouting improver.

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